भारतीय मानक **IS 14400 : 2023**

Indian Standard

ताड़ चीनी — विशिष्टि

(पहला पुनरीक्षण)

Palm Sugar — Specification

(First Revision)

ICS 67.180.10

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May 2023 **Price Group 4**

Sugar Industry Sectional Committee, FAD 02

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Sugar Industry Sectional Committee had been approved by the Food and Agriculture Division Council.

Palm sugar is manufactured by processing of *Neera* (palm juice) obtained from any of the four varieties of Palms, namely, Palmyrah Palm, Date Palm, Sago Palm and Coconut Palm. Palm sugar is not only a sweetening agent but is a good source of nutrients, such as calcium, iron, thiamine, nicotinic acid and proteins. This Indian Standard has been formulated to provide suitable guidance to the palm sugar industry for the manufacture of quality product.

This standard was originally published in 1996. In this first revision of standard, requirements of polarization and reducing sugar for Grade 1 have been modified. Further, requirement of reducing sugar and acid insoluble for Grade 2 has also been modified. Besides, two amendments issued to this standard have been incorporated.

In the formulation of this standard, due consideration has been given to the provisions of the *Food Safety and Standards Act*, 2006 and the rules framed thereunder and the *Legal Metrology* (*Packaged Commodities*) *Rules*, 2011. However, this standard is subject to the restrictions imposed under these, wherever applicable.

The composition of the committee responsible for the formulation of this standard listed in Annex A.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 ‘Rules for rounding off numerical values (*second revision*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

PALM SUGAR — SPECIFICATION

(First Revision)

1 SCOPE

This standard prescribes the requirements and methods of test for palm sugar.

2 REFERENCES

The standards listed below contain provisions which through reference in this text, constitute provision of this standard. At the time of publication, the conditions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below:

IS No.	*Title*
IS 1070 : 1992	Reagent grade water — Specification (*third revision*)
IS 1943 : 1995	Textiles — A-twill jute bags (*second revision*)
IS 5982 : 2003	Plantation white sugar — Specification (*first revision*)
IS 13952 : 2018	Palm jaggery (*Gur*) — Specification (*first revision*)
IS 14968 : 2015	Textiles — High density polyethylene (HDPE)/ polypropylene (PP) woven sacks for packing 50 kg/25 kg sugar – Specification (*first revision*)
IS 15279 : 2003	Sugar and sugar products — Methods of test

3 GRADES

The palm sugar shall be of following two grades :

a) Grade 1; and
b) Grade 2.

4 REQUIREMENTS

4.1 Palm sugar shall be prepared in crystalline or powder form. It shall be white to light brown in colour, free from dirt and other extraneous matter as well as substances deleterious to health.

4.2 Palm sugar shall be sweet to taste and shall not possess sour, salty or any other objectionable taste.

4.3 The material shall also comply with the requirements given in Table 1.

5 PACKING

5.1 Palm sugar shall be packed in clean, sound and new jute bags conforming to IS 1943 or as per IS 14968. HDPE/PP woven sacks for packing 50 kg/25 kg sugar conforming to IS 14968. The jute bags may be lined with polyethylene film. The mouth of each bag shall be either machine-stitched or rolled over and hand stitched.

5.2 In the case of smaller consumer packs the product shall be packed in food grade plastics conforming to relevant Indian Standard or any other suitable food grade non-toxic material

6 MARKING

6.1 Each bag/pack shall bear legibly and indelibly the following particulars:

a) Name of the product;
b) Name and address of the manufacture, if any;
c) Month and year of manufacture;
d) Batch or code number;
e) Net quantity;
f) The words 'best before……'(month and year to be indicated); and
g) Any other information required under the *Legal Metrology* (*Packaged Commodities*) *Rules,* 2011 and the *Food Safety and Standards* (*Packaging and Labeling*) *Regulations*, 2011.

6.2 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act*, 2016 and the Rules and Regulations framed thereunder, and the products may accordingly be marked with the Standard Mark.

7 SAMPLING

Sampling shall be done as per the method prescribed in Annex A of IS 5982.

8 TESTS

8.1 Tests shall be carried out in accordance with the methods prescribed in col (5) of Table 1.

8.2 Quality of Reagents

Unless specified otherwise, pure chemicals shall be employed in tests and distilled water (*see* IS 1070) shall be used where the use of water as a reagent is intended.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the result of analysis.

Table 1 Requirements for Palm Sugar
(*Clauses* 4.3 and 8.1)

Sl No.	Characteristics	Requirement for Grade 1	Requirement for Grade 2	Method of Test, Ref to
(1)	(2)	(3)	(4)	(5)
i)	Polarization, °Z, *Min.*	96	90	IS 15279
ii)	Loss on drying, percent by mass, *Max.*	0.5	1.0	IS 15279
iii)	Water insoluble matter, percent by mass, *Max*	0.2	0.3	IS 15279
iv)	Reducing Sugar, percent by mass, *Max.*	0.5	2	IS 15279
v)	Sulphated ash, percent by mass, *Max.*	0.10	0.15	IS 15279
vi)	Total Sugar (expressed as invert sugar) (on dry basis), *Min.*	98	97	IS 15279
vii)	Acid insoluble ash, percent by mass, *Max.*	0.2	0.4	Annex B of IS 13952

ANNEX A

(*Foreword*)

COMMITTEE COMPOSITION

Sugar Industry Sectional Committee, FAD 02

Organization	*Representative*(*s*)
National Sugar Institute, Kanpur	Shri Narendra Mohan **(*Chairperson*)**
Army Service Core (ASC), New Delhi	Lt Col B. B. Sahu
CONCERT, Chennai	Shri R. Santhanam Shri M. Somasundaram (*Alternate*)
Consumer Guidance Society of India, Mumbai	Shri Sitaram Dixit Dr M. S. Kamat (*Alternate*)
Food Corporation of India, New Delhi	Shri Deepak Kumar Panwar Shri Rakesh Kumar Ranjan (*Alternate*)
Food Safety Standards Authority of India, New Delhi	Ms Apoorva Srivastava
Global Cane Sugar Ltd, New Delhi	Dr G. S. C. Rao Shri Anil Srivastava (*Alternate*)
Indian Institute of Sugarcane Research, Lucknow	Dr A. D. Pathak Dr A. K. Sharma (*Alternate*)
Indian Institute of Toxicology Research, Lucknow	Dr Yogeshwer Shukla
Indian Sugar Exim Corporation, New Delhi	Shri Rajiv Aggarwal Shri Rajeev Kurup (*Alternate*)
Indian Sugar Mills Association, New Delhi	Shri G. K. Thakur Shri Deep Malik (*Alternate*)
MAARC Labs, Pune	Dr Vasudha Keskar
MANAS Industry, Maharashtra	Shri Jeevan Vasant Jadhav
Ministry of Consumer Affairs, Food & Public Distribution, New Delhi	Shri Suresh Chandra
National Co-Operative Development Corporation, New Delhi	Shri K. P. Vaish Shri N. K. Sharda (*Alternate*)
National Federation of Co-Operative Development Corporation, New Delhi	Shri Prakesh P. Naiknavare Shri S. Somasundaram (*Alternate*)
The Sugar Technologists Association of India, New Delhi	Shri Sanjay Awasthi Shri Anurag Goyal (*Alternate*)
Triveni Engineering & Industries Ltd, Muzaffar nagar, UP	Shri Rajesh Singh Shri P. K. Khadelwal (*Alternate*)
Tamil Nadu Sugar Corporation Ltd (TASCO), Chennai	Shri E. Muthuvelappan
Vasantdada Sugar Institute, Pune	Dr Rajeev Dani

Organization	*Representative(s)*
Walchand nagar Industries	SHRI D. R. SARDESHMUKH SHRI P. V. KAWADE (*Alternate*)
BIS Directorate General	SHRIMATI SUNEETI TOTEJA, SCIENTIST 'E'/DIRECTOR AND HEAD (FOOD AND AGRICULTURE) [REPRESENTING DIRECTOR GENERAL (*Ex-officio*)]

Member Secretary
SHRI RAJPAL
SCIENTIST 'D'/JOINT DIRECTOR
(FOOD AND AGRICULTURE), BIS

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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